

1. Record Nr.	UNINA9910786928003321
Titolo	Applied RNAi : from fundamental research to therapeutic applications / / Edited by Patrick Arbutnot and Marc S. Weinberg
Pubbl/distr/stampa	Norfolk, England : , : Caister Academic Press, , [2014] ©2014
ISBN	1-908230-67-3
Descrizione fisica	1 online resource (266 p.)
Disciplina	572.865
Soggetti	Gene silencing RNA
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Includes index.
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Contents; Contributors; Preface; Current books of interest; 1: Overview of Biogenesis and Applications of MicroRNA; Introduction; Mammalian microRNA biogenesis; Regulation during normal and potentially pathogenic microRNA biogenesis; Harnessing the RNAi pathway for gene silencing; Augmenting and antagonizing microRNA function; MicroRNA targets as gene regulators and sensors; MicroRNAs as prognostic and diagnostic markers; Conclusion; 2: Non-canonical MicroRNA Biogenesis and Function; Canonical microRNA biogenesis and function; Other small RNA biogenesis pathways Non-canonical microRNA biogenesisOther RNA modifications; Non-canonical microRNA function; Concluding remarks; 3: Non-coding RNAs and the Epigenetic Control of Gene Expression; Long non-coding RNAs epigenetic regulators in human cells; Disruption of long antisense ncRNA networks; The therapeutic potential of targeting antisense ncRNAs; Issues with using small antisense ncRNAs therapeutically; 4: From Mice to Men: Towards the Clinical Translation of MicroRNA Technologies for Somatic Cell Reprogramming; Introduction; General evidence for a role of miRNAs in pluripotency and differentiation Strategies for the identification of pluripotency-associated miRNAsDelivery or expression of miRNAs as novel tools to improve reprogramming; MiRNA-based systems to monitor or control pluripotency and differentiation; Outlook: the road towards clinical

translation of human iPSC technologies; 5: Systems Biology Tools to Understand the Role of Host MicroRNAs in Infection: a Closer Look at HIV; Background information; Systems biology tools to investigate differential miRNA expression in HIV infection; A high-content screening approach to evaluate the role of host miRNAs in HIV infection Conclusions and future prospects6: Synthetic MicroRNA Blocking Agents; Introduction; Anti-miR chemistries; Mechanisms of action and delivery of anti-miRs into cells; Validation of anti-miR activity in cells and assays; Therapeutic anti-miRs and in vivo delivery; MicroRNA sponges for suppression of microRNA activity; Target protectors for inhibition of microRNA-induced mRNA degradation; MicroRNA mimics; Prospects; 7: Exploiting MicroRNAs to Regulate Transgene Expression; Introduction; Using microRNAs avoid immune response to transgene product after gene transfer Using microRNA to improve cell specificity and escape side-effect of gene transferNovel type of expression system using microRNAs; Conclusion; 8: Use of Artificial MicroRNAs for Gene Silencing; Introduction; Evolution of artificial miRNA as therapeutic agents; Application of amiRNA; Challenges using amiRNAs as therapeutic agents; amiRNA progress to clinic; Conclusions; 9: Harnessing RNAi for the Treatment of Viral Infections; Introduction; RNAi to treat viral hepatitis; RNAi for respiratory viruses; RNAi for haemorrhagic fever viruses; Other viruses targeted by RNAi RNAi for the treatment of non-viral infections

Sommario/riassunto

Since the discovery of RNA interference (RNAi) in 1998, research on the topic has advanced at an impressive pace. Small RNAs and, in particular, micro RNAs (miRNAs) play a fundamental role in gene regulation through the activation of RNAi. Detailed insights into the mechanisms of RNAi have led to an improved understanding of gene regulation in normal and disease states, and thereby enabled the exploitation of RNAi for a variety of applications. In this book, an international panel of RNAi experts critically reviews the most interesting advances in basic applied RNAi research, highlighting the

2. Record Nr.	UNINA9910830061503321
Autore	Zhao Yan-Gang
Titolo	Structural reliability : approaches from perspectives of statistical moments / / Yan-Gang Zhao and Zhao-Hui Lu
Pubbl/distr/stampa	Hoboken, NJ : , : Wiley-Blackwell, , 2021
ISBN	1-119-62074-0 1-119-62075-9 1-119-62069-4
Descrizione fisica	1 online resource (656 pages)
Disciplina	624.1
Soggetti	Structural engineering - Statistical methods Reliability (Engineering) - Mathematics Moments method (Statistics)
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references and index.
Sommario/riassunto	"The aim of this book is to deliver a unified presentation of the theory and techniques with the emphases on the applications of the moment information of random variables for structural reliability. The contents of the book will be useful for post-graduate students, researchers and engineers in the field of civil, mechanical, aerospace and aeronautical and ship engineering, and so forth. Structural reliability deals with the safety evaluation and risk assessment of engineering structures. The structures include the buildings, bridges, aircrafts, etc., refer to those bodies or systems consisting of some materials in a certain way and having the function of bearing loads and actions. One of the principal aims of structural design is the assurance of structural performance within the constraint of economy. The reliability of a structure can therefore be defined as its ability to fulfill its design purpose for a specified reference period. Since the deterministic approach failed to provide a quantitative measure of safety, probabilistic measure of safety, i.e., the structural reliability theory, has to be used. The use of the first few moments of random variables and the performance function, in original form or in its first/second order approximation,

form the basic content of the book. The methods, being easy to be implemented, can avoid the shortcomings of FORM, such as the design points, derivative-based iterative computation, and thus are expected to be conveniently applied to structural reliability analysis and reliability based design"--
